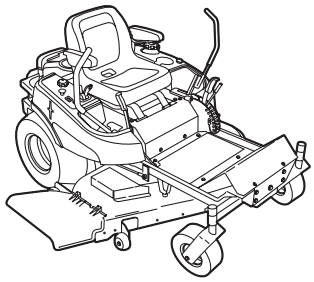
Dealer Setup & Adjustment Instructions



Zero-Turn Riders & Mowers

This Dealer Setup & Adjustment Instruction covers the following products:

250 Z (Snapper)

Mfg. No.	Description
7800072	ERZT185440BVE, 18.5HP European Rider with 44" Mower

Javelin (Simplicity)

Mfg. No.	Description
7800071	ERZT185440BVE, 18.5HP European Rider with 44" Mower

ATTENTION SETUP PERSONNEL:

The safety warnings provided in this guide and in the operator's manual included with the unit contain important information that must be obeyed when assembling, setting-up, operating, servicing, transporting, or storing the unit.

These warnings are highlighted by the safety alert triangle symbol shown above, which signifies that an important safety message is being provided.

You must read, understand, and follow these warnings and instructions, and use safe shop and work practices at all times while working on or around this unit and all other outdoor power equipment.

Sections and items denoted by the **Setup** symbol provide the information necessary to fully assemble, test, and prepare the units described above for delivery to your customers.

Additional information concerning functional tests, general adjustment procedures, and the location of normal lubrication points are included in these instructions.

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Form No. 7100545

Revision 00

IMPORTANT SAFETY INSTRUCTIONS

WARNING: This powerful cutting machine is capable of amputating hands and feet and can throw objects that can cause injury and damage! Failure to comply with the following SAFETY instructions could result in serious injury or death to the operator or other persons. The owner of the machine must understand these instructions and must allow only persons who understand these instructions to operate machine. Each person operating the machine must be of sound mind and body and must not be under the influence of any substance, which might impair vision, dexterity or judgment. If you have any questions pertaining to your machine which your dealer cannot answer to your satisfaction, call or write the Customer Service Department at SNAPPER Products Inc., McDonough, Georgia 30253. Phone: (1-800-935-2967).

PROTECTION FOR CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine. Never assume that children will remain where you last saw them.

1. KEEP children out of the mowing area and under the watchful care of a responsible adult other than the operator.
2. DO NOT allow children in yard when machine is operated (even with the blade OFF).
3. DO NOT allow children or others to ride on machine, attachments or towed equipment (even with the blades OFF). They may fall and be seriously injured.
4. DO NOT allow pre-teenage children to operate machine.
5. ALLOW only responsible adults & teenagers with mature judgment under close adult supervision to operate machine.
6. DO NOT operate blades in reverse. STOP BLADES. LOOK and SEE behind and down for children, pets and hazards before and while backing.
7. USE EXTRA CARE when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

PROTECTION AGAINST TIPOVERS

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra CAUTION. If you cannot back up the slope or if you feel uneasy on the slope, DO NOT mow it. Use extra care with grass catchers or other attachments; these affect the handling and the stability of the machine.

1. DO NOT operate machine on slopes exceeding 10 degrees (18% grade).
2. Exercise EXTREME CAUTION on slopes. Turn blades OFF when traveling uphill. Use a slow speed and avoid sudden or sharp turns.
3. DO NOT operate machine back and forth across face of slopes. Operate up and down. Practice on slopes with blades off.
4. AVOID starting, stopping or turning on slopes. If machine stops going uphill or tires lose traction, turn blades OFF and back slowly straight down the slope.

PROTECTION AGAINST TIPOVERS

(Continued From Previous Column)

5. STAY ALERT for holes and other hidden hazards. Tall grass can hide obstacles. Keep away from ditches, washouts, culverts, fences and protruding objects.
6. KEEP A SAFE DISTANCE (at least 3 feet) away from edge of ditches and other drop offs. The machine could turn over if an edge caves in.
7. Always begin forward motion slowly and with caution.
8. Use weights or a weighted load carrier in accordance with instructions supplied with a grass catcher. DO NOT operate machine on slopes exceeding 10 degrees (18% grade) when equipped with grass catcher.
9. DO NOT put your foot on the ground to try to stabilize the machine.
10. DO NOT operate machine on wet grass. Reduced traction could cause sliding.
11. Chose a low enough speed setting so that you will not have to stop or shift on a slope. Tires may lose traction on slopes even though the brakes are functioning properly.
12. DO NOT operate machine under any condition where traction, steering or stability is doubtful.
13. Always keep the machine in gear when going down slopes. DO NOT shift to neutral (or actuate hydro roll release) and coast downhill.

PREPARATION

1. Read, understand, and follow instructions and warnings in this manual and on the machine, engine and attachments. Know the controls and the proper use of the machine before starting.
2. Only mature, responsible persons shall operate the machine and only after proper instruction.
3. Data indicates that operators age 60 and above, are involved in a large percentage of mower-related injuries. These operators should evaluate their ability to operate the mower safely enough to protect themselves and others from serious injury.
4. Handle fuel with extra care. Fuels are flammable and vapors are explosive. Use only an approved fuel container. DO NOT remove fuel cap or add fuel with engine running. Add fuel outdoors only with engine stopped and cool. Clean spilled fuel from machine. DO NOT smoke.
5. Practice operation of machine with BLADES OFF to learn controls and develop skills.

IMPORTANT SAFETY INSTRUCTIONS

PREPARATION

(Continued From Previous Page)

6. Check the area to be mowed and remove all objects such as toys, wire, rocks, limbs and other objects that could cause injury if thrown by blade or interfere with mowing.
7. Keep people and pets out of mowing area. Immediately STOP blades, STOP engine, and STOP machine if anyone enters the area.
8. Check shields, deflectors, switches, blade controls and other safety devices frequently for proper operation and location.
9. Make sure all safety decals are clearly legible. Replace if damaged.
10. Protect yourself when mowing and wear safety glasses, long pants and substantial footwear.
11. Know how to STOP blades and engine quickly in preparation for emergencies.
12. Use extra care when loading or unloading the machine into a trailer or truck.
13. Check grass catcher components frequently for signs of wear or deterioration and replace as needed to prevent injury from thrown objects going through weak or worn spots.

SAFE HANDLING OF GASOLINE

To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive

1. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
2. Use only an approved fuel container.
3. DO NOT remove fuel cap or add fuel with the engine running. Allow the engine to cool before refueling.
4. DO NOT refuel the machine indoors.
5. DO NOT store the machine or fuel container inside where there is an open flame, spark or pilot light such as on a water heater or other appliances.
6. DO NOT fill fuel containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place the containers on the ground away from the vehicle before filling.
7. Remove gas-powered equipment from the vehicle or trailer and refuel it on the ground. If this is not possible, then refuel equipment using a portable container, rather than a gasoline dispenser nozzle.
8. DO NOT start gas powered equipment in enclosed vehicles or trailers.
9. Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. DO NOT use a nozzle lock-open device
10. If fuel is spilled on clothing, change clothing immediately.
11. Never overfill a fuel tank. Replace fuel cap and tighten securely.

OPERATION

1. Mount and dismount machine from left side. Keep clear of discharge opening at all times.
2. Start engine from operator's seat, if possible. Make sure blades are OFF and parking brake is set.
3. DO NOT leave machine with engine running. STOP engine, STOP blades, SET brake, and Remove key before leaving operators position of any reason.
4. DO NOT operate machine unless properly seated with feet on feet rests or pedal(s).
5. STOP BLADES and ENGINE and make sure blades have stopped before removing grass catcher or unclogging mower to prevent loss of fingers or hand.
6. Blades must be OFF except when cutting grass. Set blades in highest position when mowing over rough ground.
7. Keep hands and feet away from rotating blades underneath deck. DO NOT place foot on ground while BLADES are ON or machine is in motion.
8. DO NOT operate machine without entire grass catcher or guards in place and working. DO NOT point discharge at people, passing cars, windows or doors.
9. Slow down before turning.
10. Watch out for traffic when near or crossing roadways.
11. STOP engine immediately after striking an obstruction. Inspect machine and repair damage before resuming operation.
12. Operate machine only in daylight or with good artificial light.
13. Move joystick (if equipped) SLOWLY to maintain control during speed and directional changes.
14. Exercise CAUTION when pulling loads. Limit loads to those you can safely control and attach loads to hitch plate as specified with attachment instructions.
15. On slopes, the weight of the towed equipment may cause loss of traction and loss of control. When towing, travel slowly and allow extra distance to stop.
16. DO NOT operate engine in enclosed areas. Engine exhaust gases contain carbon monoxide, a deadly poison.
17. DO NOT discharge material against a wall or obstruction. Material may ricochet back towards the operator.
18. Only use accessories approved by the manufacturer. See manufacturer's instructions for proper operation and installation of accessories.

IMPORTANT SAFETY INSTRUCTIONS

TOWING

1. Tow only with a machine that has a hitch designed for towing. DO NOT attach towed equipment except at the hitch point.
2. Follow the manufacturer's recommendation for weight limits for towed equipment and towing on slopes.
3. DO NOT allow children or others on towed equipment.
4. On slopes, the weight of the towed equipment may cause loss of traction and loss of control.
5. Travel slowly and allow extra distance to stop.

MAINTENANCE

1. DO NOT store machine or fuel container inside where fumes may reach an open flame, spark or pilot light such as in a water heater, furnace, clothes dryer or other gas appliance. Allow engine to cool before storing machine in an enclosure. Store fuel container out of the reach of children in a well ventilated, unoccupied building.
2. Keep engine free of grass, leaves or excess grease to reduce fire hazard and engine overheating.
3. When draining fuel tank, drain fuel into an approved container outdoors and away from open flame.
4. Check brakes frequently; adjust, repair or replace as needed.
5. Keep all bolts, nuts and screws properly tight. Check that all cotter pins are in proper position.

MAINTENANCE

(Continued From Previous Column)

6. Always provide adequate ventilation when running engine. Exhaust gases contain carbon monoxide, an odorless and deadly poison.
7. Disconnect negative (black) cable from battery before performing maintenance or service. Cranking engine could cause injury.
8. DO NOT work under machine without safety blocks.
9. Service engine and make adjustments only when engine is stopped. Remove spark plug wire(s) from spark plug(s) and secure wire(s) away from spark plug(s).
10. DO NOT change engine governor speed settings or overspeed engine.
11. Lubricate machine at intervals specified in manual to prevent controls from binding.
12. Mower blades are sharp and can cut. Wrap the blades or wear heavy leather gloves and use CAUTION when handling them.
13. DO NOT test for spark by grounding spark plug next to spark plug hole; spark plug could ignite gas exiting engine.
14. Have machine serviced by an authorized dealer at least once a year and have the dealer install any new safety devices.
15. Maintain or replace safety and instruction labels as necessary.
16. Use only genuine replacement parts to assure that original standards are maintained.

Quick Setup List -

Page	Setup Procedure	Steps to Perform
6	**Uncrating**	❑ Remove crate & banding. ❑ Place transmissions in ROLL RELEASE position & roll off skid.
7	**Battery Activation** & **Installation**	❑ Charge the battery *(Note: proceed with other setup steps while battery is charging).* ❑ Install & secure battery.
8	**Check Fluid Levels**	❑ Fill & check Engine oil level. ❑ Reduce & check tire pressures *(Front tires 25 psi, rear tires 15 psi).*
9	**Mower Assembly**	❑ Torque mower blade hardware.
9	**Lubrication**	❑ Lubricate all grease & oil points.
10	**SAFETY CHECKS**	❑ Check for LOOSE HARDWARE. ❑ Check all OPERATOR CONTROLS. ❑ Perform MOWER BLADE STOPPING CHECK. *(Blade must stop within 5 seconds!)* ❑ Perform SAFETY INTERLOCK SYSTEM CHECK.
10	**Burnish Electric Clutch**	❑ Burnish electric clutch *(run for 15 seconds, repeat 10 times)*. ❑ Repeat MOWER BLADE STOPPING CHECK. *(Blade must stop within 5 seconds!)*

Setup

Uncrating

1. Using a reciprocating utility saw or equivalent, cut crate away from bottom skid. Remove crate. Remove plastic wrap.
2. Cut any banding securing the unit.

IMPORTANT NOTE
When cutting crate from bottom skid, use caution around tires and mower rollers.

3. Place transmissions in the roll release position by pushing the roll release rods (A, Figure 1), located under the rear of the unit behind each transmission, in toward the transmission until the collar on the neck of each rod passes through the keyhole in the roll release plate (B). Then lock the rod in the roll release position by sliding the rod sideways into the keyhole slot.
4. Move the motion control levers from their neutral locked positions.

   The rider can now be pushed by hand.

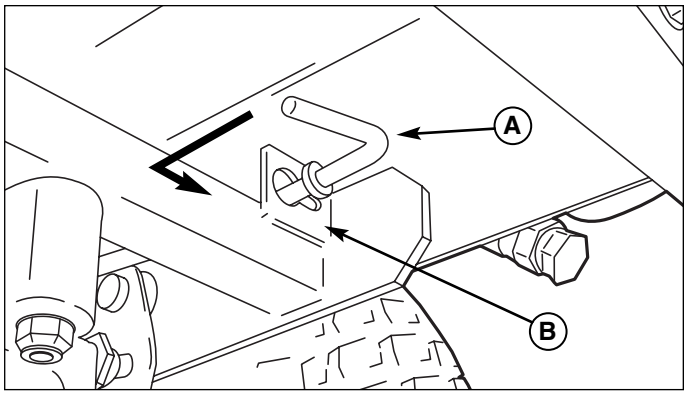


Figure 1. Roll Release Components (On Each Side)
A. Roll Release Rod
B. Roll Release Plate

5. Be sure there are no nails or sharp objects on the bottom of the skid to puncture the tires. Roll the rider forward off the skid.
6. After moving the rider, move the motion control levers back into their neutral locked positions, and re-engage the transmissions (drive position) by unlocking the roll release rods and pulling them out.

Battery Activation & Installation

⚠ WARNING

BATTERY SAFETY RULES

• Battery acid causes severe burns. Avoid contact with skin.

• Wear eye protection while handling the battery.

• To avoid an explosion, keep flames and sparks away from battery, especially while charging.

• When installing battery cables, CONNECT THE POSITIVE (+) CABLE FIRST and negative (-) cable last. If not done in this order, the positive terminal can be shorted to the frame by a tool.

Charge Battery

1. Tip the seat forward to access the battery.
2. Remove the battery from the battery compartment, and place the battery on a level, non-concrete surface.

   Note: When removing the battery cables from the battery, always remove the negative (-) cable first.
3. To charge the battery, follow the instructions provided by the battery charger manufacturer as well as all warnings included in the safety rules section of this document. Charge the battery at 6-10 amps for 1 hour. Do not charge at a rate higher than 10 amps.

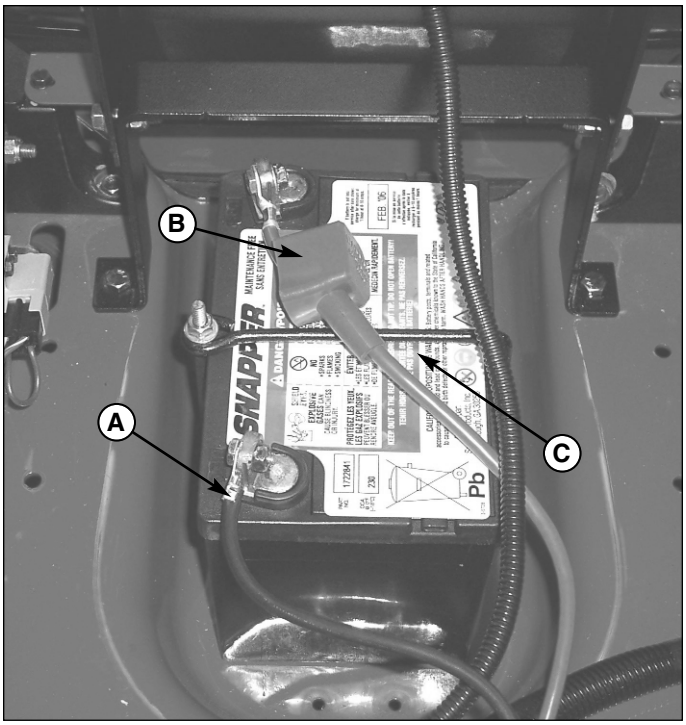


Figure 2. Battery
A. Negative Cable
B. Positive Cable & Cover
C. Hold-Down Rod

Install Battery

1. Install the battery in the battery compartment and secure using the holddown rod (C, Figure 2).
2. Connect the red positive battery cable (B) to the positive battery terminal, then cover the positive battery terminal with the terminal cover.
3. Connect the black negative battery cable (A) to the negative battery terminal.

Setup Check Fluid Levels

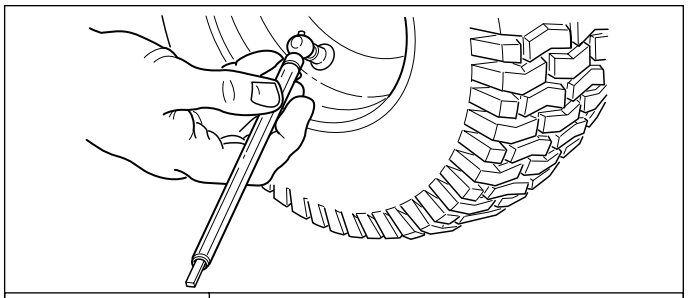
Fill & Check Engine Oil

Removing the rear cover to gain access to the engine, use the dipstick (A, Figure 3) to check the engine oil level. If necessary add engine oil. Check engine manufacturer's owner's manual for oil recommendations.

Figure 3. Check Engine Oil Level
A. Engine Oil Dip Stick

Setup Reduce & Check Tire Pressures

The tires are over-inflated for shipping purposes. Inflate to the pressures shown. Note that these pressures may differ slightly from the "Max Inflation" stamped on the side-wall of the tires. The pressures shown provide proper traction, improve cut quality, and extend tire life.



Tire	Pressure
Front	25 psi (1,72 bar)
Rear	15 psi (1,03 bar)

Figure 4. Tire Pressures

Setup

Torque Mower Blades

⚠ WARNING

For your personal safety, blade mounting hardware must each be installed with two washers, then securely tightened to noted torque.

1. Check that blades are installed with the tabs pointing up toward deck as shown in Figure 5. Secure with a nut, and two blade washers, concave side up. Use a wooden block to prevent blade rotation and torque nut to 80-90 ft-lbs.

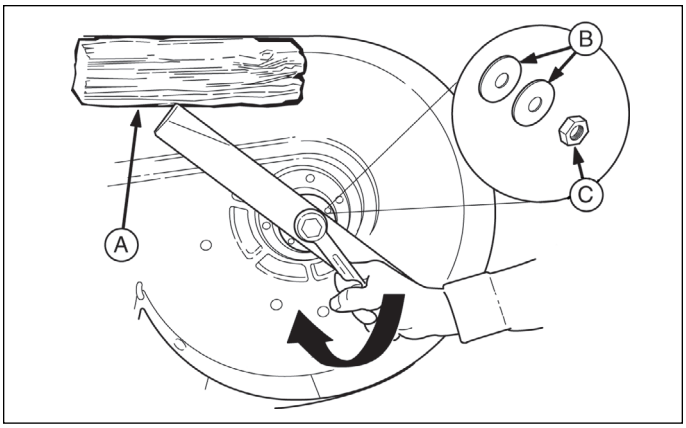


Figure 5. Blade Installation
A. 4x4 Wood Block
B. Blade Washer (2)
C. Blade Nut

Setup

Lubrication

Lubricate the unit at the following lubrication points as well as those shown in Figure 6.

Grease:

- front caster wheel axles
- front caster spindle bosses
- front axle center pivot
- mower deck arbors (blade spindles)*
- mower deck idler arm

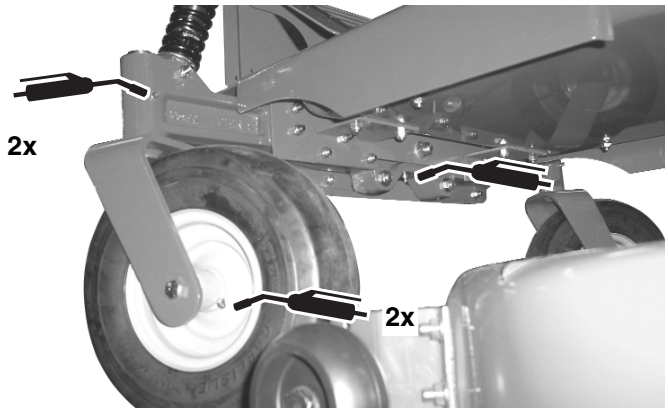
Oil:

- motion control lever pivot points
- discharge chute hinge
- deck lift pivot points

Generally, all moving metal parts should be oiled where contact is made with other parts. Keep oil and grease off belts and pulleys. Remember to wipe fittings and surfaces clean both before and after lubrication.Use grease fittings when present. Disassemble parts to apply grease to moving parts when grease fittings are not installed.

Not all greases are compatible. Use automotive-type lithium grease.

* Some deck arbors have grease fittings above the mower deck, while others have grease fittings below the deck.



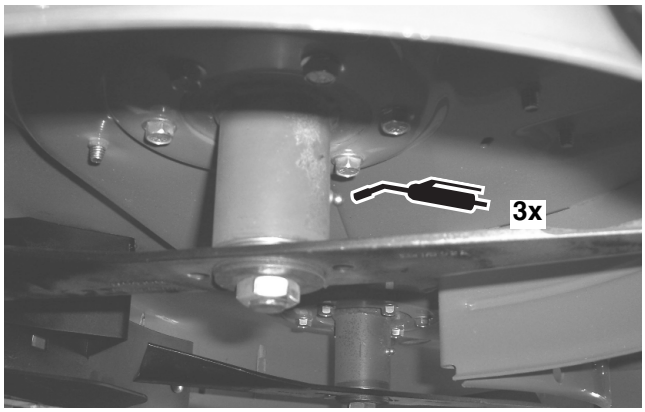


Figure 6. Lubrication Points (Grease)

Perform Safety Checks

⚠ WARNING

Disengage the PTO, stop the engine, move both motion control levers into their neutral locked positions, and wait for moving parts to stop before leaving operator's position for any reason.

If the unit does not pass the test, do not operate it. Under no circumstance should you attempt to defeat the purpose of the safety system.

Functional Tests

1. Check for loose bolts, screws, nuts, etc.
2. Start the engine and check all controls for proper operation: motion control levers, engine speed and choke cables, electric PTO clutch, cutting height adjustment lever, etc.
3. Stop the engine and check for fluid leaks: oil, gasoline, or transmission oil.
4. If any control fails to operate properly during testing or seems to be out of adjustment, check and readjust it according to the following Adjustments section.
4. Turn the key to OFF to end the demonstration.

Mower Blade Stopping Check

Mower blades and mower drive belt should come to a complete stop within five seconds after the electric clutch switch is turned off.

With the motion control levers locked into their neutral locked positions, the electric clutch switch disengaged, and an operator in the seat, start the engine. Run at full speed. Engage the electric PTO clutch switch and wait several seconds. Disengage electric clutch switch and check the time it takes for the mower drive belt to stop. If the mower drive belt does not stop within five seconds, adjust the PTO clutch according to the instructions in the Electric Clutch Adjustment section.

Seat Switch Connection

Check that the seat switch wire harness (C, Figure 7) is connected to the seat switch.

Burnish PTO Clutch

1. Select a safe area to operate the mower deck. With the motion control levers locked into their neutral locked positions, the PTO switch disengaged, and an operator in the seat, start the engine. Run the engine at full speed.
2. Engage the PTO switch and run the deck for fifteen seconds. Disengage the PTO switch and wait for the mower drive belt to stop.
3. Repeat step 2 above ten times, and then re-check the mower blade stopping time. (Stopping time must be five seconds or less.)

SAFETY INTERLOCK SYSTEM

This unit is equipped with safety interlock switches. These safety systems are present for your safety, do not attempt to bypass safety switches, and never tamper with safety devices. Check their operation regularly.

Operational SAFETY Checks

TEST 1 — ENGINE SHOULD NOT CRANK IF:

- PTO switch is engaged, OR
- Motion control levers are not locked in their NEUTRAL LOCKED positions.

TEST 2 — ENGINE SHOULD CRANK IF:

- PTO switch is NOT engaged, AND
- Motion control levers are locked into their NEUTRAL LOCKED positions.

TEST 3 — ENGINE SHOULD SHUT OFF IF:

- Operator rises off seat with PTO engaged, OR
- Operator rises off seat with motion control levers not locked in their neutral locked positions, OR
- With operator seated, right motion control lever is moved out of its neutral locked position before left motion control lever.

TEST 4 — BLADE BRAKE CHECK

The mower blades and mower drive belt should come to a complete stop within five seconds after the electric PTO switch is turned off (or operator rises off seat). If mower drive belt does not stop within five seconds, see your dealer.

NOTE: Once the engine has stopped, the PTO switch must be turned off, and the motion control levers must be locked in their NEUTRAL LOCKED positions in order to start the engine.

WARNING

If the unit does not pass a safety test, do not operate it. See your authorized dealer. Under no circumstance should you attempt to defeat the purpose of the safety interlock system.

Adjustment Procedures

Seat Adjustments

The seat and motion control levers should be adjusted so that operator's elbows are supported by the arm rests when his/her hands are on the controls, and the motion control levers can be moved through their full range of motion without contacting the operator's legs.

Seat Position Adjustment

See Figure 7. The seat can be adjusted forward and back. Remove the knobs (A), and loosen the support bolts (B). Slide the seat to the desired position, then reinstall the knobs and retighten the bolts.

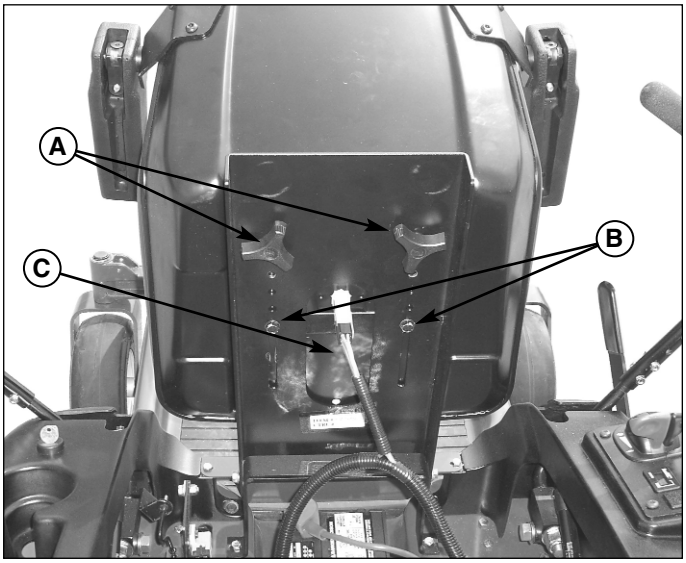


Figure 7. Seat Adjustment
A. Adjustment Knobs
B. Support Bolts
C. Seat Switch Wire Harness

Motion Control Lever Adjustment

Operator Adjustment

The motion control levers can be adjusted in two ways. The placement of the levers (how close the ends are to one another) and the height of the levers can be adjusted.

To Adjust the Lever Placement: Loosen the two bolts (B, Figure 8) securing the control track, and adjust the control track in or out to properly adjust the lever end spacing.

Note: The bottom bolt may be accessed from beneath the fender.

To Adjust the Handle Height: Remove the motion control lever mounting hardware (A, Figure 8) and reposition the lever either up or down from its original position. You may need to readjust the handle placement as described above.

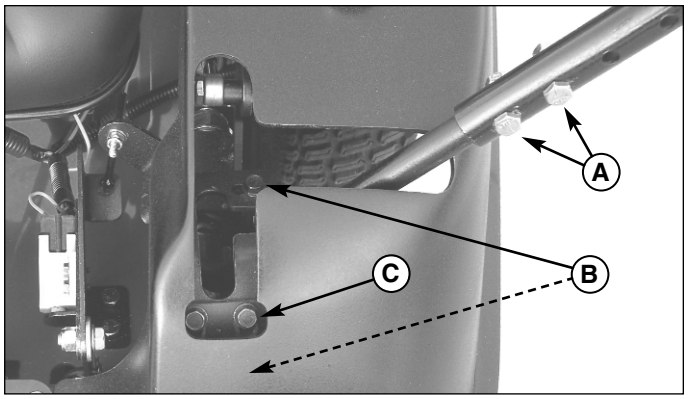


Figure 8. Motion Control Lever Adjustments
A. Lever Height Adjustment Hardware
B. Lever Placement Adjustment Hardware
C. Forward Adjust Plate

⚠ WARNING

DO NOT adjust the rider for a faster overall speed forward or reverse than it was designed for.

Speed Balancing Adjustment

If the rider drifts to the right or left when the motion control levers are in the maximum forward position, the top speed of each of these levers can be balanced. Only adjust the speed of the wheel that is traveling faster.

To Reduce the Speed of the Faster Wheel:

1. Loosen the two bolts securing the forward adjust plate (C, Figure 8).
2. Slide the plate up approximately 1/8".
3. Retighten the bolts and recheck speed balance.
4. Repeat steps 1-3 until adjustment is complete.

Lever Friction Adjustment

The motion control levers should be tight when moving in and out of their neutral locked positions. If the levers are loose, the lever friction should be adjusted.

To adjust friction:

Loosen the outside nut (C, Figure 9) securing the motion control lever (A) to the control bracket weldment (B). Tighten the inner nut (D) against the bellville washer (E) to 10 ft-lbs. Tighten the outside nut against the inside nut, without allowing the inside nut to turn.

Note: The control bracket weldment is located beneath the fender next to the operator's seat.

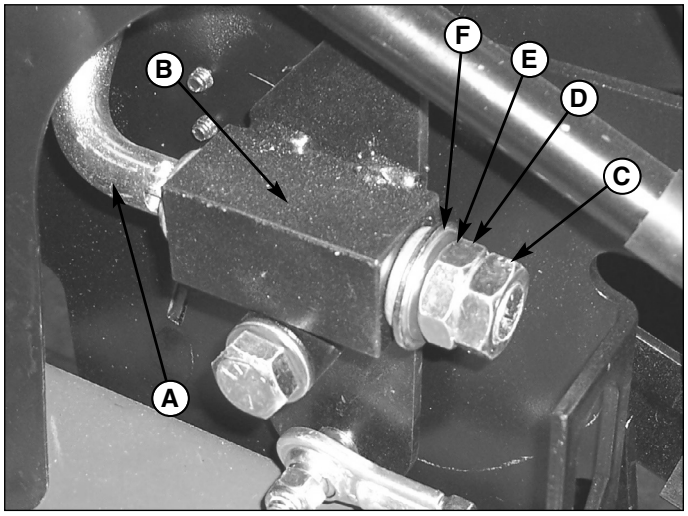


Figure 9. Motion Control Lever Friction Adjustment
A. Motion Control Lever
B. Control Bracket Weldment
C. Outside Nut
D. Inside Nut
E. Bellville Washer
F. Flat Washer

Neutral Adjustments

If the machine creeps while the motion control levers are locked into their neutral locked positions, then it may be necessary to adjust the link rods.

Perform this adjustment on a hard level surface such as a concrete floor.

IMPORTANT NOTE: This adjustment should be performed with the engine OFF. Perform the adjustment, then start the engine to check the adjustment. If further adjustment is required, stop the engine before performing the adjustment.

1. Determine which wheel is creeping. The left side transmission and link rod control the left wheel, the right link rod controls the right wheel.
2. Disengage the PTO, lock the motion control levers into their neutral locked positions, turn the engine off, remove the key, and wait for all moving parts to stop.
3. Remove the hardware (C, Figure 10) connecting the rod end (B) to the control bracket weldment (A).

   Note: The rod end is located under the fender beside the operator seat.
4. Loosen the rod end jam nut (B).

   If the transmission is creeping forward, turn the rod end in (clockwise) one or two turns to shorten the link rod (H).

   If the transmission is creeping in reverse, turn the rod end out (counterclockwise) one to two turns to lengthen the link rod.
5. Retighten the jam nut, and reconnect the rod end to the control bracket weldment.
6. Start the unit and check for transmission creep. Repeat steps 2-5 if necessary.
7. Once the correct adjustment is achieved, check operation of the neutral return system:

   a. With the right motion control lever in its neutral locked position, and the engine stopped, check the length of the rear compression spring (F). The length of the rear compression spring should initially be set to 2”. Turn the two adjustment nuts (G) in or out until the desired measurement is achieved.

   b. With the engine stopped, move the lever from its neutral locked position into neutral, then from neutral into the forward position. Release the lever. The lever should swiftly return to the neutral position and be able to be moved out into its neutral locked position with little or no additional rearward movement. Now move the lever from neutral into the reverse position and release. The lever should swiftly return to the neutral position and be able to be moved out into its neutral locked position with little or no additional forward movement.

   c. If additional rearward movement is required, increase the length of the rear compression spring set in step a by 1/16 - 1/8”. If additional forward movement is required, decrease the length of the rear compression spring by 1/16 - 1/8”. Recheck operation. Repeat as needed.

   NOTE: If equal amounts of forward and rearward movement are required, do not adjust the spring.

   d. Repeat steps a through c for left motion control lever.

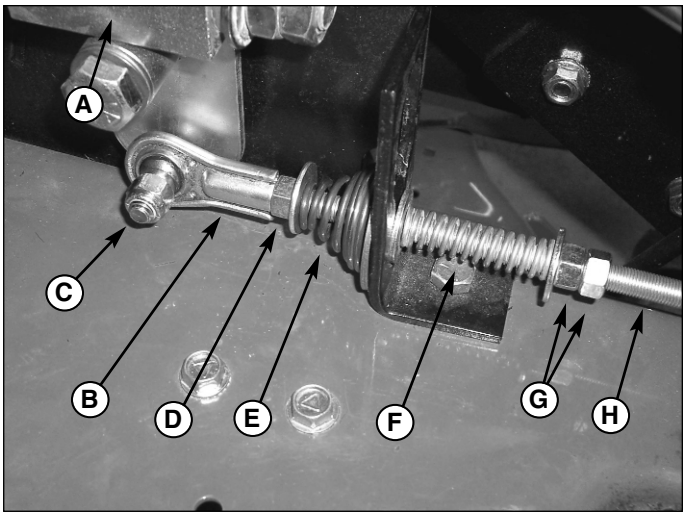


Figure 10. Neutral Adjustment (Right Side Shown)
A. Control Bracket Weldment
B. Rod End
C. Rod End Connecting Hardware
D. Jam Nut
E. Front Compression Spring
F. Rear Compression Spring
G. Spring Adjustment Nuts (2)
H. Link Rod

Adjust Parking Brake Adjustment

1. Disengage the PTO, stop the engine, block the front wheels, remove the ignition key, and lock the motion control levers into their neutral lock positions.
2. Elevate the rear end of the unit, making sure it is safely supported.
3. Before attempting brake adjustment, check the brake gear (A, Figure 11), brake arm (B), park brake bracket (D), brake rod (E), and compression spring (F) for dirt or debris that may affect brake operation.
4. Check to see that the brake arms (B) are engaged against the brake gears (A), with the teeth on the arms meshing with the teeth on the gears.

Note: The rear wheels may need to be moved slightly for the teeth to mesh properly.

5. With the parking brake engaged (motion control levers moved into their neutral locked positions), measure the length of the compression spring (F). The measurement should be between 2-1/2" and 2-3/4". If not, tighten or loosen the brake rod adjustment nut (C) until the correct measurement is achieved.

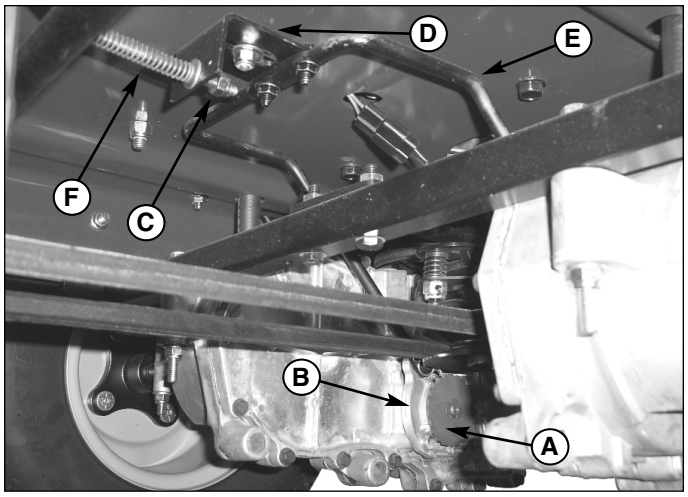


Figure 11. Parking Brake Adjustment
A. Brake Gear (One Each Side)
B. Brake Arm (One Each Side)
C. Brake Rod Adjustment Nut
D. Park Brake Bracket
E. Park Brake Rod
F. Compression Spring

Adjust Front Suspension Adjustment

(Select Models)

The shock assembly can be adjusted to vary the amount of pre-load applied to the springs. This allows the operator to customize the ride according to operator's weight and operating conditions.

LESS PRE-LOAD:

- Light operator weight
- Softer, more cushioned ride
- Best for relatively flat terrain

MORE PRE-LOAD:

- Heavy operator weight
- Stiffer, more rigid ride
- Better handling and greater stability on hilly terrain

TO ADJUST THE SPRING PRE-LOAD:

1. Park machine on a flat, level surface. Disengage the PTO, stop the engine and engage the parking brake.

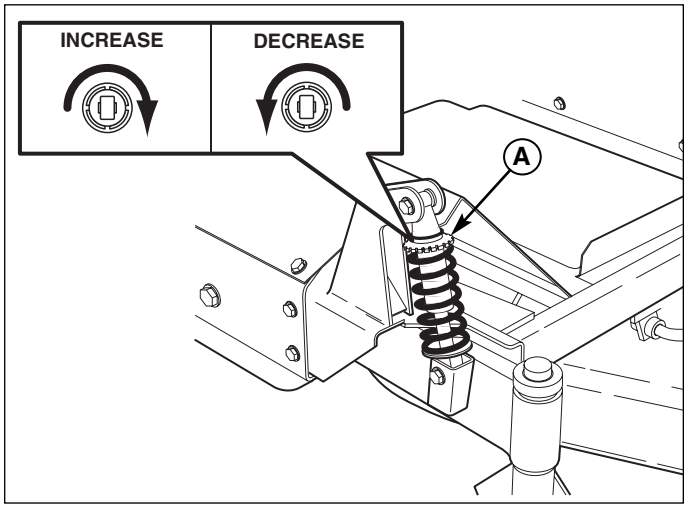


Figure 12. Front Suspension Adjustment
A. Pre-Load Adjustment Collar

2. See Figure 12. Turn the pre-load adjustment collar (A) CLOCKWISE to increase the pre-load, turn COUNTER-CLOCKWISE to decrease the pre-load. Make sure both shocks are set to the same amount of pre-load.
3. Secure the set collar by placing the rubber o-ring against it.

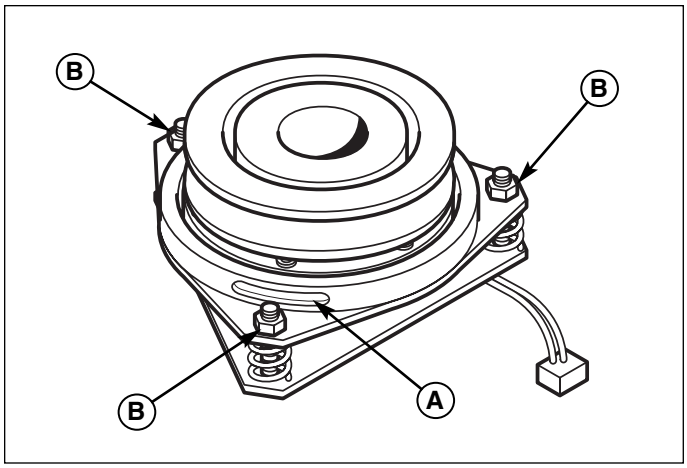


Figure 13. PTO Clutch Adjustment
A. Adjustment Window (Qty. 3, one shown)
B. Adjustment Nut

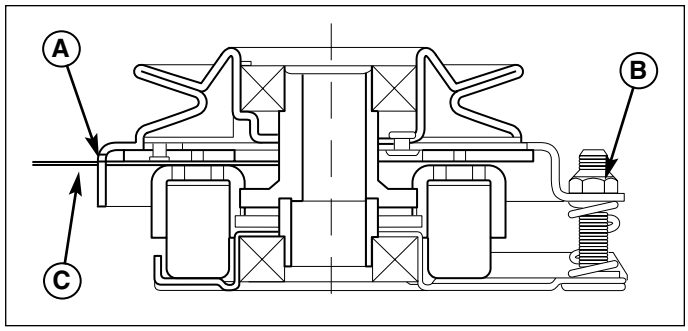


Figure 14. Adjust PTO Clutch
A. Window
B. Adjustment Nut
C. .016”-.018” (0,40-0,45mm) Feeler Gauge

PTO Clutch Adjustment

Check the PTO clutch adjustment after the initial 25 hour break-in period and then after every 250 hours of operation. Also perform the following procedure if the clutch is slipping or will not engage, or if a new clutch has been installed.

1. Remove key from ignition switch and disconnect spark plug wires to prevent the possibility of accidental starting while the PTO is being adjusted.
2. See Figure 13. Note the position of the 3 adjustment windows (A) in the side of the brake plate and the nylock adjustment nuts (B).
3. Insert a .016”-.018” (0,40-0,45mm) feeler gauge (C) through each window, positioning the gauge between the rotor face and the armature face as shown in Figure 14.
4. Alternately tighten the adjustment nuts (B, Figure 13) until the rotor face and armature face just contacts the gauge.
5. Check the windows for an equal amount of tension when the gauge is inserted and removed, and make any necessary adjustments by tightening or loosening the adjustment nuts.

NOTE: The actual air gap between the rotor and armature may vary even after performing the adjustment procedure. This is due to dimensional variations on component parts, and is an acceptable condition.

6. Check the mower blade stopping time. The mower blades and mower drive belt should come to a complete stop within five seconds after the electric PTO switch is turned off.

⚠ WARNING

To avoid serious injury, perform adjustments only with engine stopped, key removed and rider on level ground.

Blade Brake Check

Mower blades and mower drive belt should come to a complete stop within five seconds after electric PTO switch is turned off.

1. With parking brake engaged, PTO disengaged and an operator in the seat, start the engine.
2. Have an assistant observe the mower drive belt through the opening between the frame and top of mower deck. Engage the PTO and wait several seconds. Disengage the PTO and check the amount of time it takes for the mower drive belt to stop.
3. If the mower drive belt does not stop within five seconds, perform the PTO Clutch Adjustment. If the belt still does not stop within 5 seconds, replace the clutch.

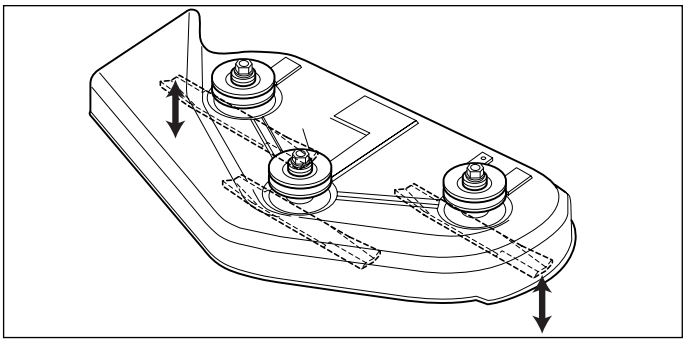


Figure 15. Orient Blades Side-to-Side

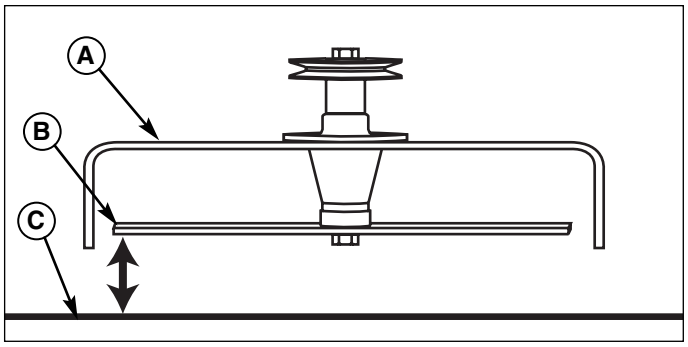


Figure 16. Measure Blade Tips to Ground
A. Mower Deck
B. Blade Tip
C. Level Ground

Mower Deck Leveling

Perform these adjustments on a flat level surface. Be sure to check and adjust tire pressures before leveling the mower deck

SIDE-TO-SIDE LEVELING

1. With the mower installed, place the rider on a smooth, level surface such as a concrete floor. Turn the front wheels so they are straight.
2. Check for bent blades and replace if necessary.
3. Place the mower cutting height lever in the fourth adjustment notch from the bottom. Arrange the outside mower blades so that they are pointing from side-to-side (Figure 15).
4. Measure the distance between the outside tips of each blade and the ground (Figures 15 & 16). The measurement should be 3” (7,6 cm), +/-1/8” (3mm). If there is more than 1/8” (3mm) difference between the measurements on each side, proceed to step 5. If the difference is 1/8” (3mm) or less, proceed to step 6.
5. Use the rear leveling nuts (A, Figure 17) to adjust the side-to-side leveling of the deck. Repeat step 4 if necessary.

FRONT-TO-BACK LEVELING

6. Arrange the blades so they face front-to-back (Figure 18).
7. Measure the distance from the ground to the front tip of the center blade and from the ground to the rear tips of the rear blades (Figures 16 & 18). The front tip of the center blade should be 1/4" (6mm) higher than the rear tips of the rear blades. If not, proceed with steps 8 - 9.

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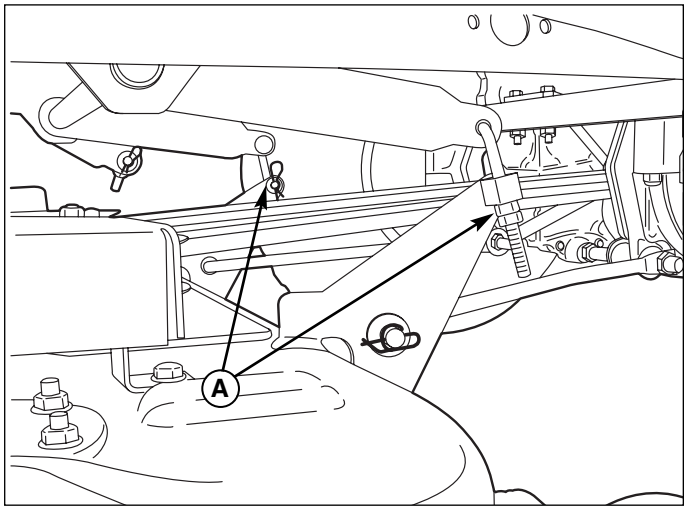

Figure 17. Mower Leveling - Side-to-Side
A. Rear Leveling Nuts
(Left side shown, right side hidden)

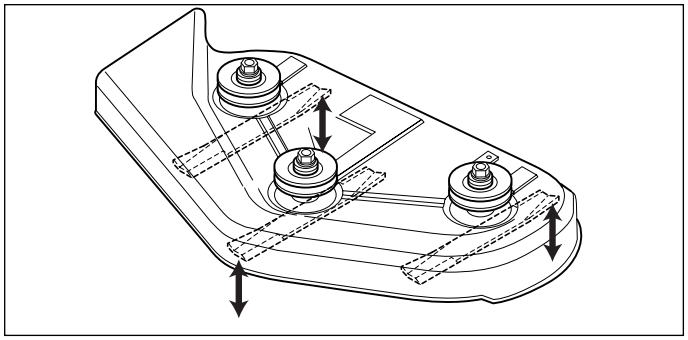

Figure 18. Orient Blades Front-to-Back

8. To adjust the front of the mower deck, use the adjusting nuts on the front deck lift rods (A, Figure 19) until the desired measurement is achieved. Be sure to adjust both sides the same amount.
9. Re-check the blade measurement then repeat steps 7 - 9 as necessary.

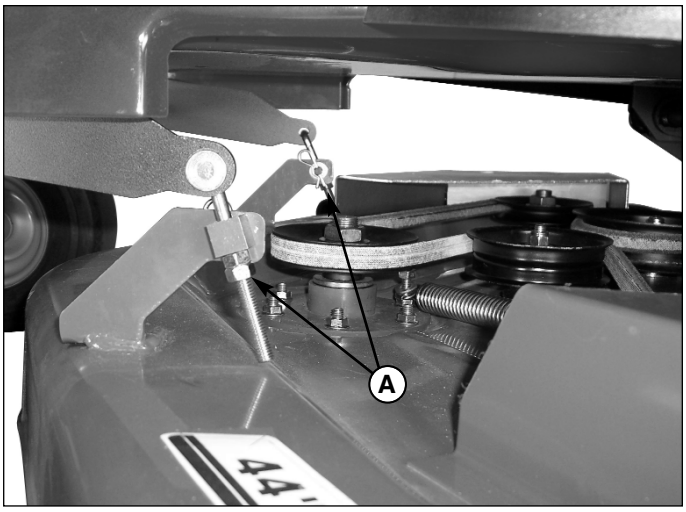

Figure 19. Mower Leveling - Front-to-Back
A. Front Leveling Nuts

ROLLER BAR LEVELING

(If Equipped)

1. First level the mower deck using the procedure found in MOWER DECK LEVELING.
2. With the mower installed, place the rider on a smooth, level surface such as a concrete floor. Turn the front wheels so they are straight.
3. Place the cutting height adjustment lever in the top adjustment notch.
4. Measure the distance between the outside ends of the roller bar and the ground. If there is more than 1/8" (3mm) difference between the measurements on each side, proceed to step 5.
5. Locate the roller bar leveling hardware on the right side of the mower deck (A, Figure 20). Loosen the hardware and raise or lower the roller bar until the correct level is achieved, then tighten the hardware. Repeat steps 4 & 5 if necessary.

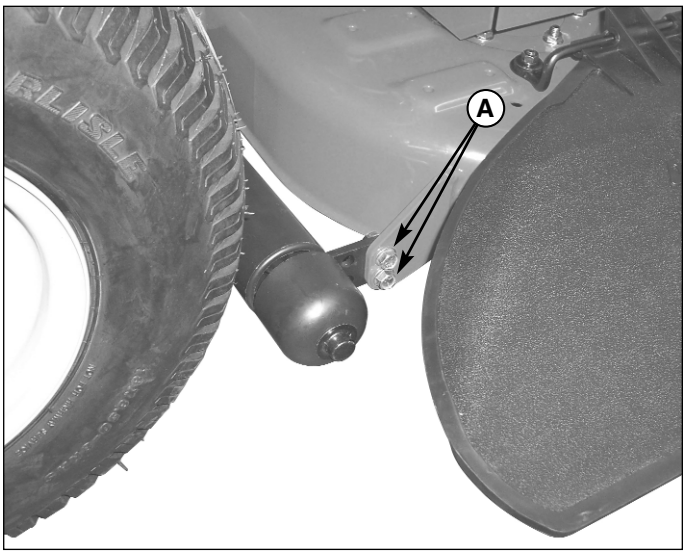

Figure 20. Roller Bar Leveling
A. Leveling Hardware

TRANSMISSION DRIVE BELT REPLACEMENT

To avoid damaging belts, DO NOT PRY BELTS OVER PULLEYS.

1. Park the rider on a smooth, level surface such as a concrete floor. Disengage the PTO, lock the motion control levers into their neutral locked positions, turn off the engine, and remove the ignition key.
2. Remove the mower belt from the PTO pulley (see MOWER BELT REPLACEMENT for instructions).
3. Relieve tension on the transmission belt (A, Figure 21) by moving the idler arm (E) in the direction indicated by the curved arrow, and remove the old belt from the crankshaft and transmission pulleys.
4. Loosen (do not remove) the anti-rotation bracket hardware (C, Figure 22), and slip the old belt out between the anti-rotation pin (B) and the PTO (A).

Note: The PTO wiring harness must be disconnected from the main wiring harness in order to remove and replace the transmission belt. Be sure to reconnect the harness after the belt is replaced.

5. Reversing steps 3-4, install the new belt, following the routing in Figure 24. Make sure the V-side of the belt runs in the grooves of the crankshaft pulley and transmission pulleys (B & C). Also, make sure that the anti-rotation pin (B, Figure 22) is inserted into the anti-rotation slot on the PTO before tightening hardware (C).
6. Reinstall the PTO drive belt.

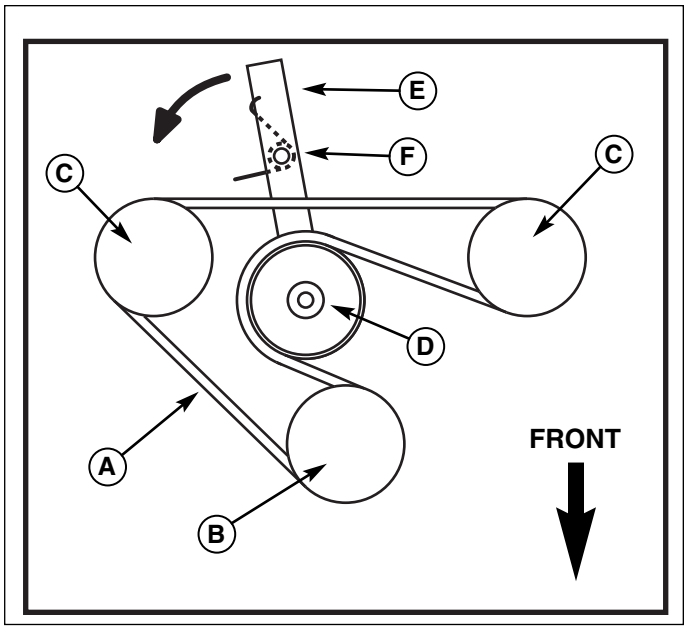

Figure 21. Transmission Drive Belt Replacement (Shown from Below; Components Removed for Clarity)
A. Transmission Drive Belt
B. Crankshaft Pulley
C. Transmission Pulley (2)
D. Idler Pulley
E. Idler Arm
F. Idler Tension Spring

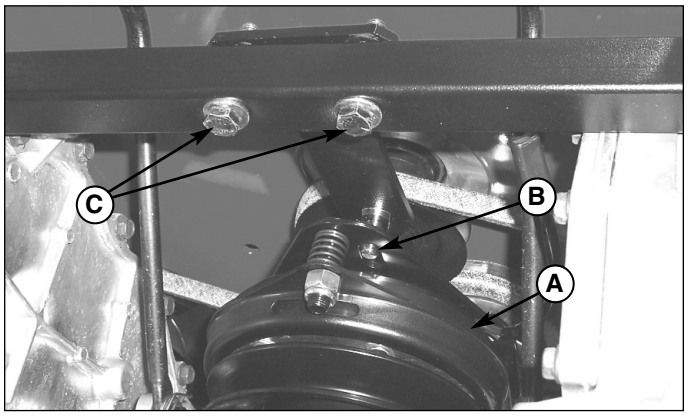

Figure 22. Anti-Rotation Bracket (View Looking Back from Mower Deck)
A. PTO Clutch
B. Anti-Rotation Pin
C. Anti-Rotation Bracket Hardware

MOWER BELT REPLACEMENT

To avoid damaging belts, DO NOT PRY BELTS OVER PULLEYS.

44" Decks:

1. Park the rider on a smooth, level surface such as a concrete floor. Disengage the PTO, lock the motion control levers into their neutral locked positions, turn off the engine, and remove the ignition key.
2. Remove the hardware (B, Figure 24) securing the belt guards (A) to the mower deck, and remove the guards.
3. Raise the mower deck to its highest cutting position.
4. Pull back firmly on the belt tensioning idler (E, Figure 23) in the direction indicated, and remove the belt from the left arbor pulley (A).
5. Remove the old belt from the remaining pulleys.
6. Reversing steps 4 - 5, install the new belt, following the routing in Figure 23. Be sure to replace the belt guards.

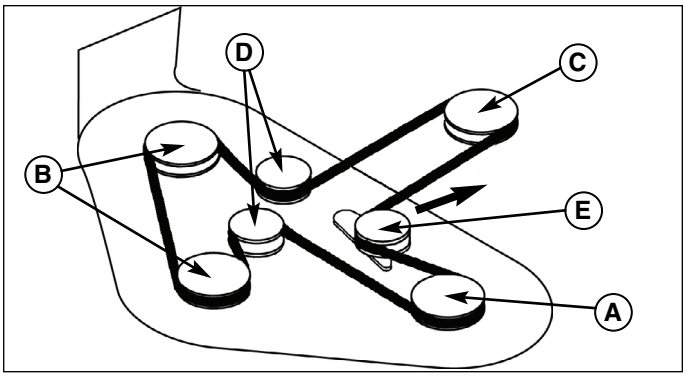

Figure 23. Mower Belt Routing - 44" Decks
A. Right Arbor Pulley
B. Left / Center Arbor Pulley
C. PTO Pulley
D. Stationary Idler
E. Belt Tensioning Idler

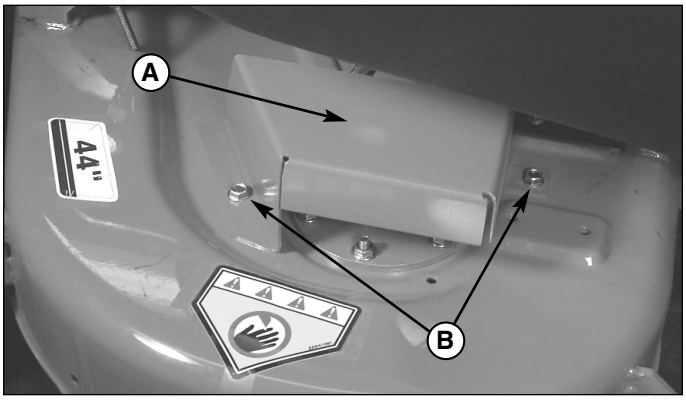

Figure 24. Belt Guard Removal
A. Belt Guard (Left side shown, right side similar)
B. Securing Hardware

FUSE REPLACEMENT

1. Park the rider on a smooth, level surface such as a concrete floor. Disengage the PTO, lock the motion control levers into their neutral locked positions, turn off the engine, and remove the ignition key.
2. Raise the seat. The fuse block is located on the right side of the rear seat support.
3. Remove and check the suspected fuse (or fuses). If blown, replace with a fuse with a rating equal to the ratings indicated in Figure 25.

WARNING

Do not use a fuse with a rating other than that specified. Serious equipment damage may result.

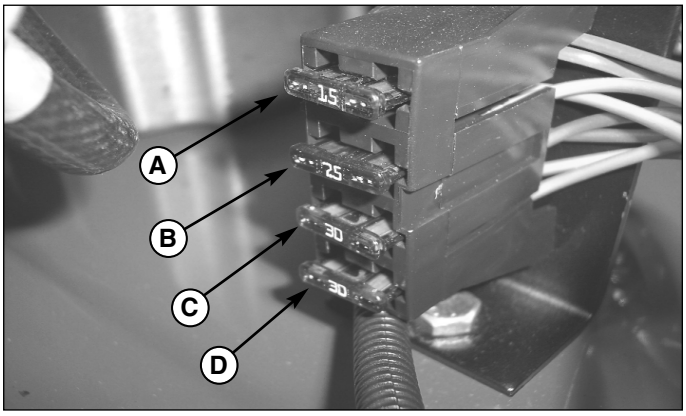

Figure 25. Fuse Designations and Ratings
A. Start - 15 Amp
B. PTO - 7.5 Amp
C. Charge - 30 Amp
D. Accessory - 30 Amp

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